```
Db      1501 TCTACAATAAAACCCTTCCCCCTAACCAGAAATGCAAAAAAAAAAAAAAA 1550

RESULT 3
AAV68046
ID   AAV68046 standard; cDNA to mRNA; 1509 BP.
XX
AC   AAV68046;
XX
DT   28-JAN-1999  (first entry)
XX
DE   Nucleic acid encoding protein 7F4.
XX
KW   Protein 7F4; differentiation; osteoblast cell; bone growth; bone sarcoma;
KW   ss.
XX
OS   Unidentified.
XX
FH   Key             Location/Qualifiers
FT   CDS             12. .542
FT                   /*tag=  a
FT   sig_peptide     12. .95
FT                   /*tag=  b
FT   mat_peptide     96. .539
FT                   /*tag=  c
XX
PN   WO9843998-A1.
XX
PD   08-OCT-1998.
XX
PF   01-APR-1998;   98WO-JP001511.
XX
PR   01-APR-1997;   97JP-00099653.
XX
PA   (CHUG-) CHUGAI RES INST MOLECULAR MEDICINE INC.
XX
PI   Kimura N,  Toyoshima T;
XX
DR   WPI; 1998-568275/48.
DR   P-PSDB; AAW80254.
XX
PT   Receptor protein inducing differentiation in osteoblast cells - has
PT   extracellular region only and can be used for screening substances for
PT   treatment of bone growth disorders.
XX
PS   Claim 2; Page 29-31; 51pp; Japanese.
XX
CC   The present sequence encodes a protein designated 7F4. This protein is
CC   capable of inducing differentiation in osteoblast cells. The protein may
CC   be used to screen compounds for the ability to bind to it, for use as
CC   ligands, agonists or antagonists and inhibiting or otherwise altering its
CC   differentiation inducing activity. Compounds so identified, as well as
CC   the protein itself, DNA encoding it, and antibodies to it, may be used in
CC   the treatment of diseases of bone growth and osteoblast differentiation,
CC   such as bone sarcomas
XX
SQ   Sequence 1509 BP; 387 A; 403 C; 294 G; 425 T; 0 U; 0 Other;

  Query Match           76.3%;  Score 1182.4;  DB 2;  Length 1509;
  Best Local Similarity   90.5%;  Pred. No. 1.1e-279;
  Matches 1321;  Conservative    0;  Mismatches  101;  Indels   38;  Gaps    4;

Qy         81 GCTGCTGCTGCTGCTGCTGCTGAATCTGCCCTTGCAGGTAAAATTTGCTATGCTAGAATT 140
              | | ||  ||||||||||||||||||||  ||||| ||||| ||||||||||   ||||
Db         50 GTTCCTCTTGCTGCTGCTGCTGAATCTGTTCTTGCCGGTAATATTTGCTATGCCTGAATC 109

Qy        141 ACACTCCTTCAAATGTCCCGCTGGTGAATACTGGTCTAAAGACGTCTGTTGCAAGAACTG 200
              | |||||||||| ||||||| ||||||||||  ||||| || |||||||||||||| |||
Db        110 ATACTCCTTCAACTGTCCCGATGGTGAATACCAGTCTAATGATGTCTGTTGCAAGACCTG 169

Qy        201 TTCTGCAGGTACATTTGTCAAGGCGCCCTGCGAAATCCCCCATACTCAAGGACAATGTGA 260
              | |  ||||||||||||||||||||||||||| ||||||||||||||||||||||||||
Db        170 TCCCTCAGGTACATTTGTCAAGGCGCCCTGCAAAATCCCCCATACTCAAGGACAATGTGA 229

Qy        261 GAAGTGTCACCCAGGAACATTCACAGAGAAAGATAATTACCTGGATGCTTGTATACTTTG 320
              |||||||||||||||||||||||||||||| |||||||||| |||| ||| |||| ||||||
Db        230 GAAGTGTCACCCAGGAACATTCACAGGGAAAGATAATGGCCTGCATGATTGTGAACTTTG 289

Qy        321 CTCCACCTGTGATAAAGATCAGGAAATGGTGGCCGACTGCTCAGCCACCAGTGACCGGAA 380
              |||||||||||||||||| ||| | |||||||| ||||| || ||||||||||||||||||
Db        290 CTCCACCTGTGATAAAGACCAGAATATGGTGGCTGACTGTTCTGCCACCAGTGACCGGAA 349

Qy        381 ATGCCAGTGCCGAACAGGTCTTTACTACTATGACCCAAAATTTCCAGAATCGTGCCGCCC 440
              |||| |||||| || |||||||||||||||||||||||||||||| ||||| ||||||||
Db        350 ATGCGAGTGCCAAATAGGTCTTTACTACTATGACCCAAAATTTCCGGAATCATGCCGCCC 409

Qy        441 ATGTACCAAGTGTCCCCAAGGAATCCCTGTCCTCCAGGAATGCAACTCCACAGCTAACAC 500
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        410 ATGTACCAAGTGTCCCCAAGGAATCCCTGTCCTCCAGGAATGCAACTCCACAGCTAACAC 469

Qy        501 TGTGTGCAGTTCATCTGTTTCAAATCCCAGAAACCGGCTGTTCCTACTGTTATCACCTTT 560
              |||||||||||||||||||||||||||||||||||| |||||||||||||| |
Db        470 TGTGTGCAGTTCATCTGTTTCAAATCCCAGAAACTGGCTGTTCCTACTGAT--------- 520

Qy        561 GAGTGTGCTAATTGTGTCCGTTGTTGTCTTCCGTATCATAAGAAGATAAAGGTTCTACAG 620
                                  | |||||||| |||||  |||||||||||||||||||
Db        521 ------------------GCTAATTGTCTTCTGTATCTGAAGAAGATAAAGGTTCTACAG 562

Qy        621 ATGTTTTCT-TAGCTTCCTTTTATTGCTATGAAGTGATACTATGGAGGCAACTCTTTTAT 679
              ||| | ||| |||||||||||||||||| ||||| || || ||||||||||||||
Db        563 ATGGTGTCTGTAGCTTCCTTTTATTGCTGTGAAGAGAAACCATGGAGGCAACTCT----- 617

Qy        680 TTTATTTATTTTATTTTATTTTTTAATGTCTTGAACTTGATTTGAAGACCAGGCTGGCCT 739
                 || ||||||||||||||||||||||||||||||||||||||||||||||||||| ||
Db        618 ----TTCATTTTATTTTATTTTTTAATGTCTTGAACTTGATTTGAAGACCAGGCTGGACT 673

Qy        740 CAAAATCACAGAGATCCAGACTAAGACAACTCTAATAAGGGAAACATTTAATTGGGACTG 799
              |||| |||||||||||| ||||| |         |   ||| ||||||| ||||||||||
Db        674 CAAACTCACAGAGATCCGGACTAGGCACCTCTAATATAGGAAAACATTGAATTGGGACTG 733

Qy        800 GCTTACAGTTTCGGACGTTTTGTCCATGATTATCATAGTGGGAAGCATGGCAGCATCTAA 859
              |||||||||||| || ||| |||||||||||||||||| |||||||||  |||   |
Db        734 GCTTACAGTTTCAGAAGTTCTGTCCATGATTATCATAGTGCGAAGCATGGAGGCACGGAG 793

Qy        860 GCAGACATGATGTTGGAGAAGGAGCTGAGATTTCTGCATCTTGATCTGCAAGCAATAAAA 919
              ||| ||||| || |||||||| |||||||| ||||||||||||||||||||||||||||
Db        794 GCACACATGGTGCTGGAGAAGAAGCTGAGAGTTCTGCATCTTGATCTGCAAGCAATAAAA 853

Qy        920 GGAGACTGTGTGCCACACTATACACAGCTTGAACATAGGAGACCTCAAAGCCTGTCCCCA 979
              |||||||||||||||||||| ||| ||||||||||||||||||||||||||||||||||
Db        854 GGAGACTGTGTGCCACACTACACATAGCTTGAACATAGGAGACCTCAAAGCCTGTCCCCA 913

Qy        980 CAGTGACAAACTTCCTCCAACAAGGTCATACCTCCTAATAATACCATTTCTTATGAGGCA 1039
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        914 CAGTGACAAACTTCCTCCAACAAGGTCATACCTCCTAATAATACCATTTCTTATGAGGCA 973

Qy       1040 AGCATTCAAACACATGAGTCTATGAGGGCCAAACCAATTCAAACCACCACAGGTTAACAA 1099
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        974 AGCATTCAAACACATGAGTCTATGAGGGCCAAACCAATTCAAACCACCACAGGTTAACAA 1033

Qy       1100 TTGCCCTCTGCAGCTCTCTGGTGGAGGCCCTCCTTGAGAGTAAGTAACAATTTAGATGAA 1159
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1034 TTGCCCTCTGCAGCTCTCTGGTGGAGGCCCTCCTTGAGAGTAAGTAACAATTTAGATGAA 1093

Qy       1160 GGCAAGTCCTGGTATCAGGTCCAAAAGAAACTCAGGATGAATGGTCCACTGTGGTTCCTA 1219
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1094 GGCAAGTCCTGGTATCAGGTCCAAAAGAAACTCAGGATGAATGGTCCACTGTGGTTCCTA 1153

Qy       1220 TTAACATACTGAAGAACATGACCTCACCTTACACGTCTCCACCTCACTGACTTCCCTTCC 1279
              |||||||||||||||||||||||||||||||| || |||||||||||||| ||||||||||
Db       1154 TTAACATACTGAAGAACATGACCTCACCTTAGACTTCTCCACCTCACTGGCTTCCCTTCC 1213

Qy       1280 CCTAGCTTCTCATTCCCAGGTAACCCTGCCATTTTTTGGTAATGTGCCTTCTTGGTTCTT 1339
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1214 CCTAGCTTCTCATTCCCAGGTAACCCTGCCATTTTTTGGTAATGTGCCTTCTTGGTTCTT 1273
```

```
Qy       1340 CCTCTCCTTTCCCCCTCTCTTCTGGTCCTTACTTCTCTTCCTCTCCCACTCTCCACCAGC 1399
             ||||||||||||||||||||||||||||||||| |||||||||||||||||||||||||||
Db       1274 CCTCTCCTTTCCCCCTCTCTTCTGGTCCTTATTTCTCTTCCTCTCCCACTCTCCACCAGC 1333

Qy       1400 CTCCTCTTAAGGCCTGAATCAGTCTGTAGGTCATGTTTAATCTACTACTTTCTCTCTGCT 1459
             |||||||||||||||| |||||||| ||| ||||||||||||||||||||||||||||||
Db       1334 CGCCTCTTAAGGCCTGAGTCAGTCTGCAGGCCATGTTTAATCTACTACTTTCTCTCTGCT 1393

Qy       1460 CTGGACTCATCCAGATGTCTCTGGCTGAGCTCTCCCTCCTATCTACAATAAAACCCTTCC 1519
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||| ||||||
Db       1394 CTGGACTCATCCAGATGTCTCTGGCTGAGCTCTCCCTCCTATCTACAATAAAA-CCTTCC 1452

Qy       1520 CCCTAACCAGAAATGCAAAA 1539
             |||||||||||||||| || |
Db       1453 CCCTAACCAGAAATGGAACA 1472
```

RESULT 4
ADM46622
ID ADM46622 standard; DNA; 1509 BP.
XX
AC ADM46622;
XX
DT 17-JUN-2004 (first entry)
XX
DE Mouse 7F4 encoding sequence.
XX
KW 7F4 gene; Osteopathic; Anorectic; Antidiabetic;
KW glycolipid metabolism disorder; osteoporosis; obesity; diabetes; ds.
XX
OS Mus musculus.
XX
FH Key Location/Qualifiers
FT CDS 12. .542
FT /*tag= a
FT /product= "7F4"
XX
PN WO2004026026-A1.
XX
PD 01-APR-2004.
XX
PF 10-SEP-2003; 2003WO-JP011545.
XX
PR 17-SEP-2002; 2002JP-00270321.
XX
PA (CHUS) CHUGAI SEIYAKU KK.
XX
PI Kake T, Saito H, Makishima F;
XX
DR WPI; 2004-340227/31.
DR P-PSDB; ADM46623.
XX
PT Transgenic non-human animal with modified expression of 7F4 gene for
PT screening remedies for bone or glycolipid metabolism disorders.
XX
PS Claim 3; SEQ ID NO 1; 44pp; Japanese.
XX
CC The present invention relates to a transgenic non-human animal having the
CC expression of 7F4 gene artificially modified. The transgenic animals are
CC a disease model for bone and glycolipid metabolism disorders. Substances
CC identified by the screening method are agents for the prevention and
CC treatment of diseases including osteoporosis, obesity and diabetes. The
CC present sequence represents the modified mouse 7F4 encoding sequence.
XX
SQ Sequence 1509 BP; 387 A; 403 C; 294 G; 425 T; 0 U; 0 Other;

Query Match 76.3%; Score 1182.4; DB 12; Length 1509;
Best Local Similarity 90.5%; Pred. No. 1.1e-279;
Matches 1321; Conservative 0; Mismatches 101; Indels 38; Gaps 4;

```
Qy         81 GCTGCTGCTGCTGCTGCTGCTGAATCTGCCCTTGCAGGTAAAATTTGCTATGCTAGAATT 140
              | | ||  ||||||||||||||||||||  ||||| ||||| |||||||||| ||||
Db         50 GTTCCTCTTGCTGCTGCTGCTGAATCTGTTCTTGCCGGTAATATTTGCTATGCCTGAATC 109

Qy        141 ACACTCCTTCAAATGTCCCGCTGGTGAATACTGGTCTAAAGACGTCTGTTGCAAGAACTG 200
              | |||||||||| ||||||| |||||||||  |||||| || |||||||||||||| |||
Db        110 ATACTCCTTCAACTGTCCCGATGGTGAATACCAGTCTAATGATGTCTGTTGCAAGACCTG 169

Qy        201 TTCTGCAGGTACATTTGTCAAGGCGCCCTGCGAAATCCCCCATACTCAAGGACAATGTGA 260
              | | ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        170 TCCCTCAGGTACATTTGTCAAGGCGCCCTGCAAAATCCCCCATACTCAAGGACAATGTGA 229

Qy        261 GAAGTGTCACCCAGGAACATTCACAGAGAAAGATAATTACCTGGATGCTTGTATACTTTG 320
              |||||||||||||||||||||||||||||| |||||||||  |||| ||| ||||  ||||||
Db        230 GAAGTGTCACCCAGGAACATTCACAGGGAAAGATAATGGCCTGCATGATTGTGAACTTTG 289

Qy        321 CTCCACCTGTGATAAAGATCAGGAAATGGTGGCCGACTGCTCAGCCACCAGTGACCGGAA 380
              |||||||||||||||||||| ||| | |||||||| ||||| || ||||||||||||||||||
Db        290 CTCCACCTGTGATAAAGACCAGAATATGGTGGCTGACTGTTCTGCCACCAGTGACCGGAA 349

Qy        381 ATGCCAGTGCCGAACAGGTCTTTACTACTATGACCCAAAATTTCCAGAATCGTGCCGCCC 440
              |||| |||||| || ||||||||||||||||||||||||||||||||||||| ||||||||
Db        350 ATGCGAGTGCCAAATAGGTCTTTACTACTATGACCCAAAATTTCCGGAATCATGCCGCCC 409

Qy        441 ATGTACCAAGTGTCCCCAAGGAATCCCTGTCCTCCAGGAATGCAACTCCACAGCTAACAC 500
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        410 ATGTACCAAGTGTCCCCAAGGAATCCCTGTCCTCCAGGAATGCAACTCCACAGCTAACAC 469

Qy        501 TGTGTGCAGTTCATCTGTTTCAAATCCCAGAAACCGGCTGTTCCTACTGTTATCACCTTT 560
              |||||||||||||||||||||||||||||||||||||||||||||| |||||||||| |
Db        470 TGTGTGCAGTTCATCTGTTTCAAATCCCAGAAACTGGCTGTTCCTACTGAT--------- 520

Qy        561 GAGTGTGCTAATTGTGTCCGTTGTTGTCTTCCGTATCATAAGAAGATAAAGGTTCTACAG 620
              |||||||||||||||||||| |||||||| |||||  |||||||||||||||||||||||
Db        521 ------------------GCTAATTGTCTTCTGTATCTGAAGAAGATAAAGGTTCTACAG 562

Qy        621 ATGTTTTCT-TAGCTTCCTTTTATTGCTATGAAGTGATACTATGGAGGCAACTCTTTTAT 679
              ||| | ||| |||||||||||||||||| ||||| || || ||||||||||||||||
Db        563 ATGGTGTCTGTAGCTTCCTTTTATTGCTGTGAAGAGAAACCATGGAGGCAACTCT----- 617

Qy        680 TTTATTTATTTTATTTTATTTTTTAATGTCTTGAACTTGATTTGAAGACCAGGCTGGCCT 739
              || |||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        618 ----TTCATTTTATTTTATTTTTTAATGTCTTGAACTTGATTTGAAGACCAGGCTGGACT 673

Qy        740 CAAAATCACAGAGATCCAGACTAAGACAACTCTAATAAGGGAAACATTTAATTGGGACTG 799
              |||| |||||||||||||| ||||| |          ||| |||||||| ||||||||||
Db        674 CAAACTCACAGAGATCCGGACTAGGCACCTCTAATATAGGAAAACATTGAATTGGGACTG 733

Qy        800 GCTTACAGTTTCGGACGTTTTGTCCATGATTATCATAGTGGGAAGCATGGCAGCATCTAA 859
              |||||||||||| || ||| |||||||||||||||||||||| |||||||| ||| |
Db        734 GCTTACAGTTTCAGAAGTTCTGTCCATGATTATCATAGTGCGAAGCATGGAGGCACGGAG 793

Qy        860 GCAGACATGATGTTGGAGAAGGAGCTGAGATTTCTGCATCTTGATCTGCAAGCAATAAAA 919
              ||| ||||| || |||||||| |||||||| |||||||||||||||||||||||||||||
Db        794 GCACACATGGTGCTGGAGAAGAAGCTGAGAGTTCTGCATCTTGATCTGCAAGCAATAAAA 853

Qy        920 GGAGACTGTGTGCCACACTATACACAGCTTGAACATAGGAGACCTCAAAGCCTGTCCCCA 979
              |||||||||||||||||||| ||| |||||||||||||||||||||||||||||||||||
Db        854 GGAGACTGTGTGCCACACTACACATAGCTTGAACATAGGAGACCTCAAAGCCTGTCCCCA 913

Qy        980 CAGTGACAAACTTCCTCCAACAAGGTCATACCTCCTAATAATACCATTTCTTATGAGGCA 1039
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        914 CAGTGACAAACTTCCTCCAACAAGGTCATACCTCCTAATAATACCATTTCTTATGAGGCA 973

Qy       1040 AGCATTCAAACACATGAGTCTATGAGGGCCAAACCAATTCAAACCACCACAGGTTAACAA 1099
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        974 AGCATTCAAACACATGAGTCTATGAGGGCCAAACCAATTCAAACCACCACAGGTTAACAA 1033

Qy       1100 TTGCCCTCTGCAGCTCTCTGGTGGAGGCCCTCCTTGAGAGTAAGTAACAATTTAGATGAA 1159
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1034 TTGCCCTCTGCAGCTCTCTGGTGGAGGCCCTCCTTGAGAGTAAGTAACAATTTAGATGAA 1093

Qy       1160 GGCAAGTCCTGGTATCAGGTCCAAAAGAAACTCAGGATGAATGGTCCACTGTGGTTCCTA 1219
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1094 GGCAAGTCCTGGTATCAGGTCCAAAAGAAACTCAGGATGAATGGTCCACTGTGGTTCCTA 1153
```

CC The invention relates to transmembrane decoy-receptor (tmst2) proteins
CC and their secreted splice variants, belonging to the tumour necrosis
CC factor (TNF) receptor super gene family and polynucleotides encoding such
CC proteins. The composition and methods are useful in diagnosing, treating
CC or ameliorating diseases associated with or resulting from abnormal tmst2
CC and/or abnormal expression of its putative ligand, such as sepsis,
CC cachexia, autoimmune diseases, inflammatory diseases, viral, bacterial
CC and parasitic diseases or cancer. They may also be used for chromosome
CC identification or mapping. The invention is useful in gene therapy. The
CC present sequence is mouse tmst2-receptor protein used in the
CC exemplification of the invention
XX
SQ Sequence 133 AA;

Query Match 68.8%; Score 748; DB 7; Length 133;
Best Local Similarity 100.0%; Pred. No. 5.9e-54;
Matches 133; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 MFGFFCSLVSSLSRWFLWRRLLLLLLLLLNLPLQVKFAMLELHSFKCPAGEYWSKDVCC 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MFGFFCSLVSSLSRWFLWRRLLLLLLLLLNLPLQVKFAMLELHSFKCPAGEYWSKDVCC 60

Qy         61 KNCSAGTFVKAPCEIPHTQGQCEKCHPGTFTEKDNYLDACILCSTCDKDQEMVADCSATS 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 KNCSAGTFVKAPCEIPHTQGQCEKCHPGTFTEKDNYLDACILCSTCDKDQEMVADCSATS 120

Qy        121 DRKCQCRTGLYYY 133
              |||||||||||||
Db        121 DRKCQCRTGLYYY 133
```

RESULT 8
ADJ45750
ID ADJ45750 standard; protein; 133 AA.
XX
AC ADJ45750;
XX
DT 06-MAY-2004 (first entry)
XX
DE Murine tmst2 00004-d1 polypeptide.
XX
KW Mouse; tmst2-receptor; tmst2 00004-d1;
KW acquired immunodeficiency syndrome; AIDS; anaemia; autoimmune disease;
KW cachexia; cancer; cerebral malaria; diabetes mellitus;
KW disseminated intravascular coagulation; haemorrhagic shock; hepatitis;
KW insulin resistance; leprosy; leukaemia; lymphoma; meningitis;
KW multiple sclerosis; ischaemia; obesity; organ rejection;
KW rheumatoid arthritis; septic shock; stroke;
KW adult respiratory distress syndrome; ARDS; tuberculosis; viral disease;
KW receptor.
XX
OS Mus musculus.
XX
PN US2004018544-A1.
XX
PD 29-JAN-2004.
XX
PF 17-JUL-2003; 2003US-00622407.
XX
PR 09-JUL-1999; 99US-0143063P.
PR 07-JUL-2000; 2000US-00612033.
XX
PA (SARI/) SARIS C.
XX
PI Saris C;
XX
DR WPI; 2004-224390/21.
DR N-PSDB; ADJ45749.
XX
PT Novel tmst2-receptor polypeptide useful for diagnosing and treating
PT disease e.g., autoimmune disease, cachexia, cancer or viral, bacterial
PT infections.
XX
PS Example 1; SEQ ID NO 6; 57pp; English.
XX
CC The invention relates to a tmst2-receptor polypeptides and the
CC polynucleotide encoding them. The sequences of the invention are useful
CC for treating diseases and conditions including acquired immunodeficiency
CC syndrome (AIDS), anaemia, autoimmune diseases, cachexia, cancer, cerebral
CC malaria, diabetes mellitus, disseminated intravascular coagulation,
CC haemorrhagic shock, hepatitis, insulin resistance, leprosy, leukaemia,
CC lymphoma, meningitis, multiple sclerosis, ischaemia, obesity, organ
CC rejection, rheumatoid arthritis, septic shock, stroke, adult respiratory
CC distress syndrome (ARDS), tuberculosis and a number of viral diseases.
CC This sequence represents a murine tmst2-receptor polypeptide clone of the
CC invention.
XX
SQ Sequence 133 AA;

Query Match 68.8%; Score 748; DB 8; Length 133;
Best Local Similarity 100.0%; Pred. No. 5.9e-54;
Matches 133; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 MFGFFCSLVSSLSRWFLWRRLLLLLLLLLNLPLQVKFAMLELHSFKCPAGEYWSKDVCC 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MFGFFCSLVSSLSRWFLWRRLLLLLLLLLNLPLQVKFAMLELHSFKCPAGEYWSKDVCC 60

Qy         61 KNCSAGTFVKAPCEIPHTQGQCEKCHPGTFTEKDNYLDACILCSTCDKDQEMVADCSATS 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 KNCSAGTFVKAPCEIPHTQGQCEKCHPGTFTEKDNYLDACILCSTCDKDQEMVADCSATS 120

Qy        121 DRKCQCRTGLYYY 133
              |||||||||||||
Db        121 DRKCQCRTGLYYY 133
```

RESULT 9
AAW80254
ID AAW80254 standard; protein; 176 AA.
XX
AC AAW80254;
XX
DT 28-JAN-1999 (first entry)
XX
DE Amino acid sequence of protein 7F4.
XX
KW Protein 7F4; differentiation; osteoblast cell; bone growth; bone sarcoma.
XX
OS Unidentified.
XX
FH Key Location/Qualifiers
FT Peptide 1. .28
FT /note= "signal peptide"
FT Protein 29. .176
FT /note= "mature protein"
XX
PN WO9843998-A1.
XX
PD 08-OCT-1998.
XX
PF 01-APR-1998; 98WO-JP001511.
XX
PR 01-APR-1997; 97JP-00099653.
XX
PA (CHUG-) CHUGAI RES INST MOLECULAR MEDICINE INC.
XX
PI Kimura N, Toyoshima T;
XX
DR WPI; 1998-568275/48.
DR N-PSDB; AAV68046.
XX
PT Receptor protein inducing differentiation in osteoblast cells - has
PT extracellular region only and can be used for screening substances for
PT treatment of bone growth disorders.
XX
PS Claim 1; Page 29-31; 51pp; Japanese.

```
XX
CC   The present sequence represents a protein designated 7F4. This protein is
CC   capable of inducing differentiation in osteoblast cells. The protein may
CC   be used to screen compounds for the ability to bind to it, for use as
CC   ligands, agonists or antagonists and inhibiting or otherwise altering its
CC   differentiation inducing activity. Compounds so identified, as well as
CC   the protein itself, DNA encoding it, and antibodies to it, may be used in
CC   the treatment of diseases of bone growth and osteoblast differentiation,
CC   such as bone sarcomas
XX
SQ   Sequence 176 AA;

  Query Match             68.7%;  Score 746.5;  DB 2;  Length 176;
  Best Local Similarity   75.1%;  Pred. No. 1e-53;
  Matches  142;  Conservative    8;  Mismatches   22;  Indels   17;  Gaps    2;

Qy          7 SLVSSLSRWFLWRRLLLLLLLLLLNLPLQVKFAMLELHSPKCPAGEYWSKDVCCKNCSAG 66
              | ||||| ||         |||||||| | | ||| | :|| || ||| | ||||| | :|
Db          5 SHVSSLSHWF--------LLLLLLNLFLPVIFAMPESYSFNCPDGEYQSNDVCCKTCPSG 56

Qy         67 TFVKAPCEIPHTQGQCEKCHPGTFTEKDNYLDACILCSTCDKDQEMVADCSATSDRKCQC 126
              |||||||:|||||||||||||||||| ||| |  | ||||||||| ||||||||||||:|
Db         57 TFVKAPCKIPHTQGQCEKCHPGTFTGKDNGLHDCELCSTCDKDQNMVADCSATSDRKCEC 116

Qy        127 RTGLYYYDPKFPESCRPCTKCPQGIPVLQECNSTANTVCSSSVSNPRNRLFLLLSPLSVL 186
              : |||||||||||||||||||||||||||||||||||||||||||||||||||| ||||:
Db        117 QIGLYYYDPKFPESCRPCTKCPQGIPVLQECNSTANTVCSSSVSNPRNWLFLLM------ 170

Qy        187 IVSVVVFRI 195
                ::|| |
Db        171 ---LIVFCI 176


RESULT 10
ADF57551
ID   ADF57551 standard; protein; 176 AA.
XX
AC   ADF57551;
XX
DT   12-FEB-2004  (first entry)
XX
DE   Mouse ymkz5 receptor.
XX
KW   Transmembrane decoy receptor; ymkz5; tumour necrosis factor; TNF; tumour;
KW   cancer; acquired immune deficiency syndrome; AIDS; anaemia;
KW   autoimmune disease; cachexia; leprosy; leukaemia; hepatitis;
KW   multiple sclerosis; myocardial ischaemia; obesity; gene therapy; mouse;
KW   receptor.
XX
OS   Mus musculus.
XX
PN   US2003096355-A1.
XX
PD   22-MAY-2003.
XX
PF   11-JUL-2002; 2002US-00193616.
XX
PR   09-JUL-1999;   99US-0143137P.
PR   07-JUL-2000; 2000US-00611989.
XX
PA   (ZHAN/) ZHANG K.
XX
PI   Zhang K;
XX
DR   WPI; 2004-008943/01.
DR   N-PSDB; ADF57550.
XX
PT   Novel ymkz5-receptor polypeptide useful for treating diseases such as
PT   tumor, cancer, AIDS, anemia, autoimmune diseases, cachexia, leprosy,
PT   leukemia, hepatitis, multiple sclerosis.
XX
PS   Claim 13; SEQ ID NO 8; 57pp; English.
XX
CC   The invention relates to transmembrane decoy receptor, ymkz5 belonging to
CC   tumour necrosis factor (TNF) receptor supergene family and nucleic acid
CC   sequences encoding such receptors. The invention is useful for detecting
CC   diseases or susceptibility to diseases related to the presence of mutated
CC   ymkz5-receptor gene such as tumours or cancers. The sequences of the
CC   invention are used as medication for a number of diseases such as
CC   acquired immune deficiency syndrome (AIDS), anaemia, autoimmune diseases,
CC   cachexia, leprosy, leukaemia, hepatitis, multiple sclerosis, myocardial
CC   ischaemia, obesity etc. The invention is also useful in gene therapy. The
CC   present sequence is mouse ymkz5 receptor protein.
XX
SQ   Sequence 176 AA;

  Query Match             68.7%;  Score 746.5;  DB 8;  Length 176;
  Best Local Similarity   75.1%;  Pred. No. 1e-53;
  Matches  142;  Conservative    8;  Mismatches   22;  Indels   17;  Gaps    2;

Qy          7 SLVSSLSRWFLWRRLLLLLLLLLLNLPLQVKFAMLELHSPKCPAGEYWSKDVCCKNCSAG 66
              | ||||| ||         |||||||| | | ||| | :|| || ||| | ||||| | :|
Db          5 SHVSSLSHWF--------LLLLLLNLFLPVIFAMPESYSFNCPDGEYQSNDVCCKTCPSG 56

Qy         67 TFVKAPCEIPHTQGQCEKCHPGTFTEKDNYLDACILCSTCDKDQEMVADCSATSDRKCQC 126
              |||||||:|||||||||||||||||| ||| |  | ||||||||| ||||||||||||:|
Db         57 TFVKAPCKIPHTQGQCEKCHPGTFTGKDNGLHDCELCSTCDKDQNMVADCSATSDRKCEC 116

Qy        127 RTGLYYYDPKFPESCRPCTKCPQGIPVLQECNSTANTVCSSSVSNPRNRLFLLLSPLSVL 186
              : |||||||||||||||||||||||||||||||||||||||||||||||||||| ||||:
Db        117 QIGLYYYDPKFPESCRPCTKCPQGIPVLQECNSTANTVCSSSVSNPRNWLFLLM------ 170

Qy        187 IVSVVVFRI 195
                ::|| |
Db        171 ---LIVFCI 176


RESULT 11
ADM46623
ID   ADM46623 standard; protein; 176 AA.
XX
AC   ADM46623;
XX
DT   17-JUN-2004  (first entry)
XX
DE   Mouse 7F4 protein.
XX
KW   7F4 gene; Osteopathic; Anorectic; Antidiabetic;
KW   glycolipid metabolism disorder; osteoporosis; obesity; diabetes.
XX
OS   Mus musculus.
XX
PN   WO2004026026-A1.
XX
PD   01-APR-2004.
XX
PF   10-SEP-2003; 2003WO-JP011545.
XX
PR   17-SEP-2002; 2002JP-00270321.
XX
PA   (CHUS ) CHUGAI SEIYAKU KK.
XX
PI   Kake T,  Saito H,  Makishima F;
XX
DR   WPI; 2004-340227/31.
DR   N-PSDB; ADM46622.
XX
PT   Transgenic non-human animal with modified expression of 7F4 gene for
PT   screening remedies for bone or glycolipid metabolism disorders.
XX
PS   Claim 3; SEQ ID NO 2; 44pp; Japanese.
XX
CC   The present invention relates to a transgenic non-human animal having the
CC   expression of 7F4 gene artificially modified. The transgenic animals are
CC   a disease model for bone and glycolipid metabolism disorders. Substances
CC   identified by the screening method are agents for the prevention and
```

```
FT   CDS             12. .542
FT                   /*tag=  a
FT   sig_peptide     12. .95
FT                   /*tag=  b
FT   mat_peptide     96. .539
FT                   /*tag=  c
XX
PN   WO9843998-A1.
XX
PD   08-OCT-1998.
XX
PF   01-APR-1998;   98WO-JP001511.
XX
PR   01-APR-1997;   97JP-00099653.
XX
PA   (CHUG-) CHUGAI RES INST MOLECULAR MEDICINE INC.
XX
PI   Kimura N,  Toyoshima T;
XX
DR   WPI; 1998-568275/48.
DR   P-PSDB; AAW80254.
XX
PT   Receptor protein inducing differentiation in osteoblast cells - has
PT   extracellular region only and can be used for screening substances for
PT   treatment of bone growth disorders.
XX
PS   Claim 2; Page 29-31; 51pp; Japanese.
XX
CC   The present sequence encodes a protein designated 7F4. This protein is
CC   capable of inducing differentiation in osteoblast cells. The protein may
CC   be used to screen compounds for the ability to bind to it, for use as
CC   ligands, agonists or antagonists and inhibiting or otherwise altering its
CC   differentiation inducing activity. Compounds so identified, as well as
CC   the protein itself, DNA encoding it, and antibodies to it, may be used in
CC   the treatment of diseases of bone growth and osteoblast differentiation,
CC   such as bone sarcomas
XX
SQ   Sequence 1509 BP; 387 A; 403 C; 294 G; 425 T; 0 U; 0 Other;

  Query Match            53.8%;  Score 377.4;  DB 2;  Length 1509;
  Best Local Similarity  90.7%;  Pred. No. 3.4e-98;
  Matches  402;  Conservative    0;  Mismatches   41;  Indels    0;  Gaps    0;

Qy         81 GCTGCTGCTGCTGCTGCTGCTGAATCTGCCCTTGCAGGTAAAATTTGCTATGCTAGAATT 140
Db         50 GTTCCTCTTGCTGCTGCTGCTGAATCTGTTCTTGCCGGTAATATTTGCTATGCCTGAATC 109

Qy        141 ACACTCCTTCAAATGTCCCGCTGGTGAATACTGGTCTAAAGACGTCTGTTGCAAGAACTG 200
Db        110 ATACTCCTTCAACTGTCCCGATGGTGAATACCAGTCTAATGATGTCTGTTGCAAGACCTG 169

Qy        201 TTCTGCAGGTACATTTGTCAAGGCGCCCTGCGAAATCCCCCATACTCAAGGACAATGTGA 260
Db        170 TCCCTCAGGTACATTTGTCAAGGCGCCCTGCAAAATCCCCCATACTCAAGGACAATGTGA 229

Qy        261 GAAGTGTCACCCAGGAACATTCACAGAGAAAGATAATTACCTGGATGCTTGTATACTTTG 320
Db        230 GAAGTGTCACCCAGGAACATTCACAGGGAAAGATAATGGCCTGCATGATTGTGAACTTTG 289

Qy        321 CTCCACCTGTGATAAAGATCAGGAAATGGTGGCCGACTGCTCAGCCACCAGTGACCGGAA 380
Db        290 CTCCACCTGTGATAAAGACCAGAATATGGTGGCTGACTGTTCTGCCACCAGTGACCGGAA 349

Qy        381 ATGCCAGTGCCGAACAGGTCTTTACTACTATGACCCAAAATTTCCAGAATCGTGCCGCCC 440
Db        350 ATGCGAGTGCCAAATAGGTCTTTACTACTATGACCCAAAATTTCCGGAATCATGCCGCCC 409

Qy        441 ATGTACCAAGTGTCCCCAAGGAATCCCTGTCCTCCAGGAATGCAACTCCACAGCTAACAC 500
Db        410 ATGTACCAAGTGTCCCCAAGGAATCCCTGTCCTCCAGGAATGCAACTCCACAGCTAACAC 469

Qy        501 TGTGTGCAGTTCATCTGTTTCAA 523
Db        470 TGTGTGCAGTTCATCTGTTTCAA 492


RESULT 12
ADM46622
ID   ADM46622 standard; DNA; 1509 BP.
XX
AC   ADM46622;
XX
DT   17-JUN-2004  (first entry)
XX
DE   Mouse 7F4 encoding sequence.
XX
KW   7F4 gene; Osteopathic; Anorectic; Antidiabetic;
KW   glycolipid metabolism disorder; osteoporosis; obesity; diabetes; ds.
XX
OS   Mus musculus.
XX
FH   Key             Location/Qualifiers
FT   CDS             12. .542
FT                   /*tag=  a
FT                   /product= "7F4"
XX
PN   WO2004026026-A1.
XX
PD   01-APR-2004.
XX
PF   10-SEP-2003; 2003WO-JP011545.
XX
PR   17-SEP-2002; 2002JP-00270321.
XX
PA   (CHUS ) CHUGAI SEIYAKU KK.
XX
PI   Kake T,  Saito H,  Makishima F;
XX
DR   WPI; 2004-340227/31.
DR   P-PSDB; ADM46623.
XX
PT   Transgenic non-human animal with modified expression of 7F4 gene for
PT   screening remedies for bone or glycolipid metabolism disorders.
XX
PS   Claim 3; SEQ ID NO 1; 44pp; Japanese.
XX
CC   The present invention relates to a transgenic non-human animal having the
CC   expression of 7F4 gene artificially modified. The transgenic animals are
CC   a disease model for bone and glycolipid metabolism disorders. Substances
CC   identified by the screening method are agents for the prevention and
CC   treatment of diseases including osteoporosis, obesity and diabetes. The
CC   present sequence represents the modified mouse 7F4 encoding sequence.
XX
SQ   Sequence 1509 BP; 387 A; 403 C; 294 G; 425 T; 0 U; 0 Other;

  Query Match            53.8%;  Score 377.4;  DB 12;  Length 1509;
  Best Local Similarity  90.7%;  Pred. No. 3.4e-98;
  Matches  402;  Conservative    0;  Mismatches   41;  Indels    0;  Gaps    0;

Qy         81 GCTGCTGCTGCTGCTGCTGCTGAATCTGCCCTTGCAGGTAAAATTTGCTATGCTAGAATT 140
Db         50 GTTCCTCTTGCTGCTGCTGCTGAATCTGTTCTTGCCGGTAATATTTGCTATGCCTGAATC 109

Qy        141 ACACTCCTTCAAATGTCCCGCTGGTGAATACTGGTCTAAAGACGTCTGTTGCAAGAACTG 200
Db        110 ATACTCCTTCAACTGTCCCGATGGTGAATACCAGTCTAATGATGTCTGTTGCAAGACCTG 169

Qy        201 TTCTGCAGGTACATTTGTCAAGGCGCCCTGCGAAATCCCCCATACTCAAGGACAATGTGA 260
Db        170 TCCCTCAGGTACATTTGTCAAGGCGCCCTGCAAAATCCCCCATACTCAAGGACAATGTGA 229

Qy        261 GAAGTGTCACCCAGGAACATTCACAGAGAAAGATAATTACCTGGATGCTTGTATACTTTG 320
Db        230 GAAGTGTCACCCAGGAACATTCACAGGGAAAGATAATGGCCTGCATGATTGTGAACTTTG 289

Qy        321 CTCCACCTGTGATAAAGATCAGGAAATGGTGGCCGACTGCTCAGCCACCAGTGACCGGAA 380
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  Best Local Similarity   79.9%;  Pred. No. 2.1e-50;
  Matches  131;  Conservative    5;  Mismatches   20;  Indels    8;  Gaps    1;

Qy          7 SLVSSLSRWFLWRRLLLLLLLLLLNLPLQVKFAMLELHSFKCPAGEYWSKDVCCKNCSAG 66
              | ||||| ||        |||||||| | | ||| | :|| || ||| | ||||| | :|
Db          5 SHVSSLSHWF--------LLLLLLNLFLPVIFAMPESYSFNCPDGEYQSNDVCCKTCPSG 56

Qy         67 TFVKAPCEIPHTQGQCEKCHPGTFTEKDNYLDACILCSTCDKDQEMVADCSATSDRKCQC 126
              |||||||:|||||||||||||||||| ||| |  | ||||||||| ||||||||||||:|
Db         57 TFVKAPCKIPHTQGQCEKCHPGTFTGKDNGLHDCELCSTCDKDQNMVADCSATSDRKCEC 116

Qy        127 RTGLYYYDPKFPESCRPCTKCPQGIPVLQECNSTANTVCSSSVS 170
              : |||||||||||||||||||||||||||||||||||||||||||
Db        117 QIGLYYYDPKFPESCRPCTKCPQGIPVLQECNSTANTVCSSSVS 160


RESULT 12
ADM46623
ID   ADM46623 standard; protein; 176 AA.
XX
AC   ADM46623;
XX
DT   17-JUN-2004  (first entry)
XX
DE   Mouse 7F4 protein.
XX
KW   7F4 gene; Osteopathic; Anorectic; Antidiabetic;
KW   glycolipid metabolism disorder; osteoporosis; obesity; diabetes.
XX
OS   Mus musculus.
XX
PN   WO2004026026-A1.
XX
PD   01-APR-2004.
XX
PF   10-SEP-2003; 2003WO-JP011545.
XX
PR   17-SEP-2002; 2002JP-00270321.
XX
PA   (CHUS ) CHUGAI SEIYAKU KK.
XX
PI   Kake T,  Saito H,  Makishima F;
XX
DR   WPI; 2004-340227/31.
DR   N-PSDB; ADM46622.
XX
PT   Transgenic non-human animal with modified expression of 7F4 gene for
PT   screening remedies for bone or glycolipid metabolism disorders.
XX
PS   Claim 3; SEQ ID NO 2; 44pp; Japanese.
XX
CC   The present invention relates to a transgenic non-human animal having the
CC   expression of 7F4 gene artificially modified. The transgenic animals are
CC   a disease model for bone and glycolipid metabolism disorders. Substances
CC   identified by the screening method are agents for the prevention and
CC   treatment of diseases including osteoporosis, obesity and diabetes. The
CC   present sequence represents the modified mouse 7F4 protein.
XX
SQ   Sequence 176 AA;

  Query Match             69.9%;  Score 705;  DB 8;  Length 176;
  Best Local Similarity   79.9%;  Pred. No. 2.1e-50;
  Matches  131;  Conservative    5;  Mismatches   20;  Indels    8;  Gaps    1;

Qy          7 SLVSSLSRWFLWRRLLLLLLLLLLNLPLQVKFAMLELHSFKCPAGEYWSKDVCCKNCSAG 66
              | ||||| ||        |||||||| | | ||| | :|| || ||| | ||||| | :|
Db          5 SHVSSLSHWF--------LLLLLLNLFLPVIFAMPESYSFNCPDGEYQSNDVCCKTCPSG 56

Qy         67 TFVKAPCEIPHTQGQCEKCHPGTFTEKDNYLDACILCSTCDKDQEMVADCSATSDRKCQC 126
              |||||||:|||||||||||||||||| ||| |  | ||||||||| ||||||||||||:|
Db         57 TFVKAPCKIPHTQGQCEKCHPGTFTGKDNGLHDCELCSTCDKDQNMVADCSATSDRKCEC 116

Qy        127 RTGLYYYDPKFPESCRPCTKCPQGIPVLQECNSTANTVCSSSVS 170
              : |||||||||||||||||||||||||||||||||||||||||||
Db        117 QIGLYYYDPKFPESCRPCTKCPQGIPVLQECNSTANTVCSSSVS 160


RESULT 13
ADM46624
ID   ADM46624 standard; protein; 148 AA.
XX
AC   ADM46624;
XX
DT   17-JUN-2004  (first entry)
XX
DE   Mouse 7F4 protein #2.
XX
KW   7F4 gene; Osteopathic; Anorectic; Antidiabetic;
KW   glycolipid metabolism disorder; osteoporosis; obesity; diabetes.
XX
OS   Mus musculus.
XX
PN   WO2004026026-A1.
XX
PD   01-APR-2004.
XX
PF   10-SEP-2003; 2003WO-JP011545.
XX
PR   17-SEP-2002; 2002JP-00270321.
XX
PA   (CHUS ) CHUGAI SEIYAKU KK.
XX
PI   Kake T,  Saito H,  Makishima F;
XX
DR   WPI; 2004-340227/31.
XX
PT   Transgenic non-human animal with modified expression of 7F4 gene for
PT   screening remedies for bone or glycolipid metabolism disorders.
XX
PS   Claim 3; SEQ ID NO 3; 44pp; Japanese.
XX
CC   The present invention relates to a transgenic non-human animal having the
CC   expression of 7F4 gene artificially modified. The transgenic animals are
CC   a disease model for bone and glycolipid metabolism disorders. Substances
CC   identified by the screening method are agents for the prevention and
CC   treatment of diseases including osteoporosis, obesity and diabetes. The
CC   present sequence represents the modified mouse 7F4 protein.
XX
SQ   Sequence 148 AA;

  Query Match             63.6%;  Score 641;  DB 8;  Length 148;
  Best Local Similarity   84.8%;  Pred. No. 3.3e-45;
  Matches  112;  Conservative    5;  Mismatches   15;  Indels    0;  Gaps    0;

Qy         39 AMLELHSFKCPAGEYWSKDVCCKNCSAGTFVKAPCEIPHTQGQCEKCHPGTFTEKDNYLD 98
              || | :|| || ||| | ||||| | :|||||||:|||||||||||||||||| ||| |
Db          1 AMPESYSFNCPDGEYQSNDVCCKTCPSGTFVKAPCKIPHTQGQCEKCHPGTFTGKDNGLH 60

Qy         99 ACILCSTCDKDQEMVADCSATSDRKCQCRTGLYYYDPKFPESCRPCTKCPQGIPVLQECN 158
                | ||||||||| |||||.|||||||:|: |||||||||||||||||||||||||||||
Db         61 DCELCSTCDKDQNMVADCSATSDRKCECQIGLYYYDPKFPESCRPCTKCPQGIPVLQECN 120

Qy        159 STANTVCSSSVS 170
              ||||||||||||
Db        121 STANTVCSSSVS 132


RESULT 14
ABG09344
ID   ABG09344 standard; protein; 380 AA.
XX
AC   ABG09344;
XX
DT   13-FEB-2002  (first entry)
XX
DE   Novel human diagnostic protein #9335.
```